

# The relationship between value preference and gender in future teachers in Chilean higher education

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## ABSTRACT

**Purpose:** This study aimed to examine the values associated with pedagogical training and the differences in value preferences among students based on gender in institutions in the central-southern area of Chile. The objective of the research was to analyse the values associated with pedagogical training and the differences in value preferences according to the gender of students in universities in the central-southern area of Chile.

**Design/Methodology/Approach:** The methodology used in the study is quantitative and descriptive. The study sample consisted of 437 students from Chilean universities. The information was collected using a standardized instrument called the adapted values test.

**Findings:** The results indicated a clear preponderance in the categories of moral, ecological, individual, affective and bodily values. Political and moral values were not particularly taken into consideration. Significant differences were found concerning gender. Females achieve higher mean scores than males except in instrumental values.

**Conclusions:** The results show the educational needs of future teachers in terms of axiological training from a gender perspective.

**Practical Implications:** Identifying and analyzing the axiological structure of students and teachers in private and public universities in Chile will allow proposing value education in the curricular plans of future teachers. On the other hand, the values transmitted by teachers are different which implies the development of pedagogical training programs that strengthen gender differences as an instance of cultural equity.

**Contribution to the Literature:** This research underscores the importance of value education in teacher training programs and explains how university students perceive them.

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**Keywords:** *Axiology, Chile, Future teachers, Gender, Higher education, Value education, Value preference.*

## 1. INTRODUCTION

Values have been studied in many educational types of research with the interest of incorporating them at different levels of the educational system (Cívico-Ariza, Colomo-Magaña, & González-García, 2021; Gamage, Dehideniya, & Ekanayake, 2021; Moreno, Ramírez, & Escobar, 2020; Suyatno et al., 2019; Wong, 2022). Similarly, training in values is fundamental for the formation of students, constituting one of the foundations of the educational process which is to be highly valued (Murray, 2019; Soto González, Fernández, Campos, & Ruz, 2021). Teachers communicate values that can have long-lasting consequences for the student in the exercise of their professional position (Meeus, Cools, & Placklé, 2018). Teachers perform the educational task of conveying values from a gender perspective (Borg, 2019; De la Torre-Sierra & Guichot-Reina, 2022; McFarland, Murray, & Phillipson, 2016; Posard, Kavanagh, Edwards, & Efron, 2018). Currently, universities have a responsibility to offer future teachers high-quality education while present teachers provide the same to students to change society. This

action is materialized through an educational practice contributing to the education of excellence (González et al., 2020).

The university education of future teachers seeks to train integral professionals for society. Academic training should not only be in pedagogical and disciplinary knowledge but also in values (Czerniawski, Guberman, & MacPhail, 2017; Obeidat et al., 2022; Suyatno et al., 2019). Values can be defined as those principles that guide and order the actions of every single person who makes up society (Moreno et al., 2020). Values education deals with the educational practice through which the student is supposed to learn values (Gamage et al., 2021). Society socializes men and women to play different gender roles and this process of adaptation to social gender roles expresses gender differences in value priorities (Eagly, 1995).

Similarly, gender can be considered a social construction (De la Torre-Sierra & Guichot-Reina, 2022). The relationships that a person establishes with other human beings shape his or her gender identity. It is a differentiated process for men and women depending on the sociocultural environment. In this sense, gender by its performative nature is expressed through a continuum of interactions, negotiations and permanent modifications in the social, political, cultural, economic and educational spheres of society (Atir & Ferguson, 2018; Couture & Birstler, 2023). The school is a space in which different agents' dialogue takes place in matters that go beyond pedagogical subjects and are linked to the values of the society where it is located. It is significant from the performativity of gender to know how students' values are configured in different school subjects based on social discourses made by teachers (Bruner, 2003). The way that speech is transmitted, connections are formed, and classroom culture is shaped by gender (Li, 2023; McFarland et al., 2016).

Language plays a fundamental role in the configuration of gender identity. The discourses that individuals receive contain values, representations, ideas and stereotypes. Teachers' discourses are a kind of guide that gradually shapes the construction of students' personal identity (Šabić, Baranović, & Rogošić, 2022). Cole (1999) indicates that cultural interactions are "intersubjective shared cultural schemas. These interactions function to interpret experience and guide action in a wide variety of domains" (Cole, 1999). Cultural schemas are the result of interaction first in the family nucleus and then in the formal education system.

These cultural models developed by teachers through pedagogical activities allow the acquisition of cultural tools that guide personal existence, relationships with others and the environment. Thus, understanding the preferred values of aspiring teachers in various university training programmes based on their gender provides us the chance to examine the variations and significance focused on the value system.

The scope of inquiring about the preferences and values of future teachers has its origin in the importance of their professional work. This makes it possible for equal opportunities, inclusion, free access to knowledge and democratic coexistence (Lohbeck & Retelsdorf, 2021; Maaranen, Kynäslähti, Byman, Jyrhämä, & Sintonen, 2019). Supriadi, Supriyadi, Abdussalam, and Rahman (2022) in their bibliometric study found that in the field of research, there is an academic tendency towards paying little attention to the value education model. As a result of this unexplored topic, in the current environment of growing marginalization, inequality and exclusion, it becomes imperative to examine the value system of upcoming educators and their hierarchy concerning the gender of the teacher.

Therefore, the objective of this research is to analyze the values associated with pedagogical training and the differences in value preferences according to gender. The research questions are as follows:

1. What values can be identified in pedagogical students of Chilean higher education?
2. What is the axiological hierarchy of pedagogical students in Chilean higher education?
3. What are the preferences for values according to gender among pedagogical students of Chilean higher education? Is there any statistical difference in the preferences for values between male and female participants?

## 2. LITERATURE REVIEW

### 2.1. Education in Values

The 21st century has given rise to unprecedented ways of social interaction making visible different models of life, beliefs, criteria of judgment and customs as well as new practices and discourses on education, values, and their teaching. In this new context of globalization, diversity and emphasis on inequalities, the issue of values education acquires special attention.

According to [Lovat \(2021\)](#), [Halstead and Taylor \(2000\)](#) and [Gervilla \(2010\)](#), teaching values in the educational field is currently an essential task. [Lovat \(2017\)](#) points out that values education properly implemented impacts positively the fields of emotions, social skills, moral discernment and academic work. [Halstead and Taylor \(2000\)](#) propose the cultivation of values through the development of the school curriculum, the consideration of the school ethos and the implementation of practical approaches to values education. [Gervilla \(2010\)](#) exposes the need to implement an approach to values education that considers the totality of the dimensions of the human being to achieve integral development.

According to another perspective, [Suyatno et al. \(2019\)](#) argue the importance of the role of teachers in the implementation of strategies to educate in values in secondary schools based on the educational vision of the establishment. Similarly, the study by [Obeidat et al. \(2022\)](#) points out the benefits of the practice of sports activities in the acquisition and development of values in students. The concern for values education is a current issue relevant to the training of future teachers. [González Alonso and Guzón Nestar \(2017\)](#) point out that the integral preparation of people is established through training in values. Hence, a good system of values when assumed allows difficulties to be solved and life decisions to be made.

In this sense, [Díez-Gutiérrez \(2020\)](#) informs that in initial teacher training, university teachers explicitly or implicitly transmit to students' values and attitudes that influence the way of doing professional practice. At the same time, they reciprocate the values by training students when they practice professionally. Thus, values education enhances a pedagogy of good practices for the achievement of academic, social, emotional and moral goals ([Lovat, 2017](#)).

## *2.2. Professional Training in Values for Future Teachers*

The comprehension, acknowledgment and implementation of a value system in educational practice provide an important obstacle to future teachers' professional development. We require an education based on a commitment to others and their environment as well as on their ability to transform the individual and society. [Tumlovskaja \(2022\)](#) refers to values as models that shape our lives, influence our actions and express our fundamental beliefs in accordance with the cultural contexts in which we live. Values play an essential role in education ([Lovat, 2021](#)).

[Díez-Gutiérrez \(2020\)](#) points out that the training of future teachers should focus on effective values education since teachers are expected to serve as role models and reflect positive qualities and attitudes towards the changing learning context.

Similarly, it is stressed that the education received by future pedagogues should be oriented towards a series of ethical, moral and professional values that promote the development of social skills and practices focused on the full development of the interpersonal existence of individuals ([Martí & Moliner, 2018](#)). In this regard, [Osorio \(2017\)](#) stresses the need for complete professional training that includes not only the development and acquisition of professional competence but also the integration or reinforcement of human values. [McDonnell \(2021\)](#) indicates that teachers form values using life stories.

[Martí and Moliner \(2018\)](#) express that the university must train future professionals in the development of skills and the dissemination of values of social responsibility in the local and global sociocultural context. In addition, [Moreno et al. \(2020\)](#) highlight the significance of values education in higher education through their systematic review study. The commitment to today's society in the training of professionals with ethical values and the implementation of a structure of values serves as a basis for decision-making following the needs of the economic and social context of the 21<sup>st</sup> century.

[Gamage et al. \(2021\)](#) in their study indicate the importance of personal values for academic performance. Personal values guide the choice of learning approaches that allow good academic work performance especially in higher education. [Wong \(2022\)](#) studied the relationship between values and the choice of academic career among Hong Kong university students.

Identifying and clarifying values enables informed decision-making about pursuing a career. [Cívico-Ariza et al. \(2021\)](#) conducted a study to determine the scale of values in high school students and the possible differences concerning the sex variable. Students prioritize values that favor affective relationships, moral coexistence and the development of their identity. Female students achieve the highest scores in all categories.

### 2.3. Studies on Gender and Values

Previous research shows that people's appreciation of the importance of values is different for men and women (Posard et al., 2018). It is important to emphasize that value evaluations vary greatly from one another since the fundamental features of values may differ for men and women (Borg, 2019). The study by McFarland et al. (2016) notes that teacher gender influences classroom relationships and students' self-concept development. Gender distinctions made by teachers in the processes of socialization and identity formation may be one of the motivating factors in value choices between males and females. Lohbeck and Retelsdorf (2021) measure the relationship between value beliefs and individual student characteristics for expectations of success in academic performance. Females feel more stressed about the achievement of a task. Aniley, Öhrn, and Fereja (2023) indicate that children learn and represent gender through activities in the classroom, outside the classroom and in their close school environment. According to Huertas-Delgado et al. (2020) standards of living, gender, and educational programmes all affect the values that most students define as being essential. Eriksson, Björnstjerna, and Vartanova (2020) highlight the importance of the role of the cultural values of society in gender equality and the implications for equal opportunities. Ramírez, Ramos, and Molina (2021) observe significant differences between values internalized by women and men in the development of an academic sports activity. These differences may be underlined in the professional sphere, perpetuating gender stereotypes in social contexts. Values drive the social make-up of femininity and masculinity (Rebollo-Catalán, Ruiz-Pinto, & García-Pérez, 2017). On the other hand, Li (2023) cautions that children at birth are exposed to all kinds of information regarding gender variety and later at school end up confirming more diversified gender identities and expressions. Teachers carry out a crucial task in the appropriation of children's gender roles through permanent interaction, communication and cultural modeling (Šabić et al., 2022). Thus, a teacher's actions and words always convey messages that reflect their attitudes and perspectives concerning gender (Freeman, 2007). In this sense, it is necessary to study the value preferences of future teachers according to gender to measure the type of human being and society that involves the student.

## 3. METHODOLOGY

### 3.1. Research Design

In the current study, the researchers have employed a quantitative methodology that is descriptive in nature. Newhart and Patten (2023) point out that this methodology emphasizes measuring events and phenomena that take place in people and their environment. In this study, the information was collected through a standardized questionnaire which was quantified and analysed statistically. The analysis was based on the perceptions of students at universities in Chile regarding different axiological categories and the values that make them up.

### 3.2. Sample of the Study

The study sample consisted of 437 students of whom 130 were male and 370 were female from four universities in central-southern Chile. The sample was non-probabilistic and intentional. The students are in their third year of university education specifically about the training program in mathematics, Spanish, English, and basic general education. In Table 1, the sample distribution is presented for the four Chilean universities.

Table 1. Sample distribution by gender and age.

Variables	Universities*	U1	U2	U3	U4	Total
Gender	Male	42	29	20	39	130
	Female	86	76	68	77	307
	Total	128	105	88	116	437
Age	Less than ≤20	42	22	22	24	110
	21-24	68	58	46	52	224
	25 ≤	9	10	9	9	37
	Not declared	9	15	11	31	66
	Total	128	105	88	116	437

Note: \*The four universities are from the central south zone of Chile.

### 3.3. Instrument

In the current study, the adapted value test (González-Gijón, Martínez-Heredia, Jiménez Ríos, & Soriano Díaz, 2021) was used as a research instrument to obtain the information. This instrument is based on the axiological model of integral education designed by Gervilla (2000). The originality of this test lies in the evaluation of 25 words in each of the categories of value which allows us to detect the different senses of value, i.e., the aspects that are more or less valued or rejected. The selection of this instrument was based on its ability to determine future teachers' value preferences, create a hierarchy and compare preferences based on gender. This instrument is made up of eleven categories of values. Each category has 25 words. In Table 2, the number of elements for each dimension of the value system is presented. For each category, the participants have to rate each word on a Likert scale of 2 to -2. The range of the score oscillates between - 50 and +50 points.

Table 2. Instrument used: Test of values.

Categories	Elements
Corporal	25
Intellectual	25
Affective	25
Individual	25
Moral	25
Aesthetic	25
Social	25
Political	25
Ecological	25
Instrumental	25
Religious	25
Total	275

Source: González-Gijón et al. (2021).

It has been widely used to gather data for studies and has been proven to be very accurate. The questionnaires are available in English (Cívico-Ariza, Colomo Magaña, & González García, 2020) and Spanish (Cívico-Ariza et al., 2021; González et al., 2020). In the present study, Cronbach's alpha coefficient which reflects the high internal consistency of the test was found to be 0.86, reflecting high reliability.

### 3.4. Data Collection and Ethical Considerations

Once obtaining the approval of the University Ethical Committee (UEC report 111/2022), the data collection process started with a formal meeting with the directors of the participating departments. The research instruments were applied to the participants. All the ethical considerations such as asking for permission and assurance of confidentiality were maintained through the process. The data analysis procedure was carried out with the SPSS program (version 25). First, descriptive statistics were obtained for the set of test responses (mean, standard deviation and maximum or minimum values). At the same time, the Mann-Whitney U test was performed to verify the significant differences based on gender.

## 4. RESULTS

The results are presented below according to the research questions raised in this study.

### 4.1. Value System for Future Teachers

The first research question dealt with the identification of values in future teachers. The means and standard deviation (SD) of the participants were calculated on the items of the instrument for each of its domains as shown in Table 3 to answer this question.

**Table 3.** Descriptive statistics: Value system for future teachers.

Categories	N	Range	Minimum	Maximum	Total	Mean	SD	Variance
Corporal	437	89	-39	50	13689	31.32	10.33	106.84
Intellectual	437	74	-13	61	13205	30.22	11.44	130.86
Affective	437	74	-24	50	15498	35.46	12.18	148.39
Individual	437	89	-38	51	17048	39.01	11.18	125.05
Moral	437	75	-25	50	18864	43.17	8.70	75.69
Aesthetic	437	86	-36	50	11796	26.99	13.47	181.67
Social	437	100	-50	50	13077	29.92	12.52	156.88
Political	437	100	-50	50	8237	18.85	14.64	214.34
Ecological	437	92	-42	50	18768	42.95	9.83	96.78
Instrumental	437	65	-15	50	11016	25.21	11.27	127.16
Religious	437	100	-50	50	2967	6.79	22.30	497.38

#### 4.2. Hierarchy of Values Obtained for Each Category of Values

After identifying the values in the participants, the second research question was to find out the hierarchy of values obtained for each category of values. For this purpose, the different dimensions of the values along with their mean, standard deviation (SD), minimum and maximum range were calculated. This is presented in Table 4.

**Table 4.** Hierarchy of values in future teachers.

Hierarchy of values	N	Mean	SD	Minimum	Maximum	Rank
Moral	437	43.17	8.70	-25	50	1
Ecological	437	42.95	9.83	-42	50	2
Individual	437	39.01	11.18	-38	51	3
Affective	437	35.46	12.18	-24	50	4
Corporal	437	31.32	10.33	-39	50	5
Intellectual	437	30.22	11.44	-13	61	6
Social	437	29.92	12.52	-50	50	7
Aesthetic	437	26.99	13.47	-36	50	8
Instrumental	437	25.21	11.27	-15	50	9
Political	437	18.85	14.64	-50	50	10
Religious	437	6.79	22.30	-50	50	11

After doing a comprehensive axiological analysis, Table 4 indicates that it is clear that the categories of moral values which include terms such as assistance, responsibility, tolerance, truth, peace, honesty, virtue, etc. are the most significant ( $M = 43.17$ ,  $SD = 8.70$ ).

After the moral values, the most important categories are ecological ( $M=42.95$ ,  $SD=9.84$ ). Ecological values refer to the understanding and protection of the surroundings which comprise expressions such as pure air, biodiversity, forest, lake, rain, etc. This is followed by the individual values ( $M=39.01$ ,  $SD=11.18$ ) in which words like identity, intimacy, personal opinion, experience, personal growth, etc. are present. In the hierarchy, affective ( $M=35.46$ ,  $SD=12.18$ ) and corporal values ( $M=31.32$ ,  $SD=10.33$ ) come next. Affective values are understood as elements that comprise the affection and feelings of each person including words like care, emotion, empathy, happiness, etc. Corporal values refer to personal or self-interests connected to the well-being of the human corporal body. Words related to this category are beauty, sex, swimming, physical health, etc. In this category, some of the expressions refer to obligation while others reflect convenience.

The next categories in the hierarchy list are intellectual ( $M=30.22$ ,  $SD=11.44$ ) and social values ( $M=29.92$ ,  $SD=12.52$ ). In the case of intellectual values, the words that examine this category are library, seminar, teaching, assessment, intellectual interest, etc. In terms of social values, the words are equal opportunities, social inclusion, sociable, collaboration, community, dialogue, hospitality social network, etc. Next in the hierarchy are the aesthetic values ( $M=26.99$ ,  $SD=13.47$ ) that are closely followed by the category of instrumental values ( $M=25.21$ ,  $SD=11.27$ ). The aesthetic values are characterized by words such as art, singing, dance, poetry, cinema,



architecture, etc. Instrumental values refer to the economic dimensions and are appreciated as a means of life due to the benefits they carry. In this category, the important words are industry, work, WhatsApp, Facebook, etc. Finally, religious and political values are the least appreciated by the participants in this study. The political (M=18.85, SD=14.64) and religious (M=6.79, SD=22.30) values are the second last in the preferences respectively and are placed considerably below the previous categories of values. These political values (words like common good, neighborhood, strikes, law, constitution, democracy, etc.) having a mean below the average show that the students do not have much political inclination or they do not value the political system. Religious values are the last ones in the hierarchy of values. They include words like Bible, baptism, spiritual, catechism, religious mass, etc. These two categories along with the social are the ones with a minimum value of -50. Interestingly, the high standard deviation in the case of religious values (SD = 22.30) compared to other categories indicates that the values are spread out over a wider range and there is high variation in the responses of the students. This category shows the lowest level of agreement among the participating students. On the other hand, the least unstable category was that of moral values which showed an SD of 8.7 with the highest level of agreement among the participants.

#### 4.3. Dimensions of Value of Gender

The last research question was concerned with the preferences of values according to gender in pedagogical students and to examine any statistical differences underlying the value system concerning gender. In this regard, the Mann-Whitney U test was performed to compare the means of independent samples confirming that there are significant differences ( $p \leq 0.05$ ) between students according to the variables analyzed. A descriptive and inferential comparative analysis was done from a gender perspective concerning the 11 categories of value. It is worth noting that females were found to achieve higher scores when compared to men in all the analyzed value categories (Figure 1) except instrumental values. Physical, intellectual, emotive, artistic, individual, moral, social, political, ecological and religious values are all valued more highly by them.

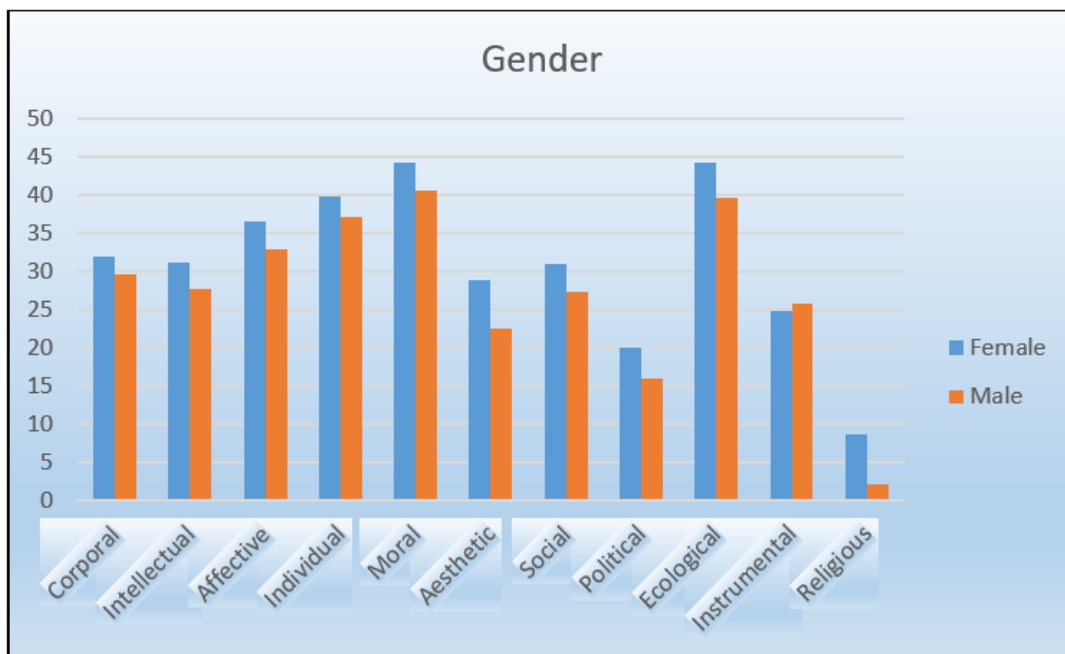


Figure 1. Value hierarchies concerning gender.

**Table 5.** Comparison of value hierarchies with respect to gender.

Categories	Gender	N	Media	Standard deviation
Corporal	M	130	29.75	11.594
	F	307	31.99	9.698
Intellectual	M	130	27.74	13.085
	F	307	31.27	10.515
Affective	M	130	32.85	14.420
	F	307	36.57	10.939
Individual	M	130	37.23	14.039
	F	307	39.77	9.653
Moral	M	130	40.60	10.810
	F	307	44.25	7.389
Aesthetic	M	130	22.48	15.411
	F	307	28.90	12.101
Social	M	130	27.36	13.036
	F	307	31.01	12.162
Political	M	130	15.98	14.871
	F	307	20.07	14.394
Ecological	M	130	39.70	13.029
	F	307	44.32	7.744
Instrumental	M	130	25.91	12.441
	F	307	24.91	10.753
Religious	M	130	2.14	22.041
	F	307	8.76	22.154

Table 5 shows that the female students reported having a higher liking for each category of values. The female participants (N=307) reported a higher mean in corporal values (M= 31.99, SD= 9.70) while the male participants (130) reported with slightly lower average (M= 29.75, SD= 11.60). Mean differences revealed that females have a greater liking for moral values (M=44.25, SD=7.39) than males (M=40.60, SD=10.81). The highest mean difference between these two categories was found in the category of aesthetic values where the female participants had a mean value of 28.90 (SD=12.01) as compared to the males with a mean value of 22.48 (SD=15.41). In the case of religious values, the same pattern was found between females (M=8.76, SD=11.15) and males (M=2.14, SD=22.04). The only category of values where the males scored more is instrumental where they reported a slightly higher mean (M=25.91, SD=12.44) than the female participants (M=24.91, SD=10.75). Another interesting thing to note in the analysis is that the pattern liking for all the categories of values is the same for both genders, that is whether it is high or low ( see Figure 1). Finally, it can be noted that the female participants mostly reported liking ecological, moral, and individual values and evaluated religious values the least. The same holds for the men who stated they liked moral, ecological and personal values the most and religion the least. In this sense, the only difference is that in the case of females, the ecological values have the highest mean whereas in the case of males, the moral values occupy the highest. The Mann-Whitney U test was performed to compare the means of independent samples confirming that there are significant differences ( $p \leq 0.05$ ) between male and female students as shown in Table 6. According to Table 6, the value categories for corporal, individual, and instrumental have p values greater than 0.05. Therefore, there are no significant differences concerning gender in these categories. In the rest of the categories (instrumental, affective, moral, aesthetic, social, political, ecological and religious values), there are significant differences between females and males which is especially noteworthy.

**Table 6.** Mann-Whitney U test for comparing the median values concerning gender to examine statistical differences

Cat.*	COR	INT	AFF	IND	MOR	AES	SOC	POL	ECO	INS	REL
M-W	17790	16792	17030	18655	15216	14813	16446	16832	14638	18248	16077
Wilcoxon	26305	25307	25545	27170	23731	23328	24961	25347	23153	65526	24592
Z	-1.795	-2.622	-2.425	-1.079	-3.963	-4.262	-2.908	-2.588	-4.471	-1.415	-3.213
Sig.	0.073	0.009	0.015	0.281	0.000	0.000	0.004	0.010	0.000	0.157	0.001

Note: \*Cat.- Categories.



## 5. DISCUSSION

In the current study, the values are divided based on the mean score. The categories of values ranging from 31 and above are classified as high, 25 to 30 as medium and finally below 25 as low. The results of this study show a clear preponderance of the categories of values: moral, ecological, individual, affective and bodily. In the first place of preference are moral values which are in line with the studies conducted by [Cantú \(2018\)](#), [Moreno et al. \(2020\)](#) and [Gamage et al. \(2021\)](#). These values manifest the importance given by future teachers to lead a morally worthy life and it is highly significant given the role they play within their educational community. The importance of ecological values does not coincide with the studies of [Marušiĳ-Jablanoviĳ \(2018\)](#) and [González-Gijón et al. \(2021\)](#). A strong identification of the future teachers to the following themes such as environmental protection, sustainability and ecology were found to be important findings of this study. In terms of the significance of personal values, we find a category associated with the evolution of the development of personal identity, an outcome that aligns with the research conducted by [McDonnell \(2021\)](#). The importance given to affective values coincides with the research conducted by [González et al. \(2020\)](#) and [De Groot, Leijgraaf, and van Dalen \(2023\)](#) as these values are an essential element for the personal well-being of individuals ([Abella et al, 2017](#)). Moreover, in the classroom context, creating affective bonds enhances the achievement of better learning. The high score reached by the body values shows the importance that future teachers assign to taking care of their health ([Obeidat et al., 2022](#)). This result is in agreement with the study of [Saggese and Beramendi \(2019\)](#) which points out the importance of values related to health, personal stability and psychosocial well-being.

Intellectual, social, artistic, and instrumental mean values come under the middle range. In the context of the students participating in the study, intellectual values are considered significant coinciding with the studies conducted by [Cívico-Ariza et al. \(2020\)](#) and [Marušiĳ-Jablanoviĳ \(2018\)](#). The social values category presents the concern of young people with social relationships which falls in line with the study by [Lovat \(2017\)](#) indicating that values education positively influences the development of social skills. On the other hand, the presence of aesthetic values reveals the aspiration to exist in worthy environments that encourage the development of leisure of a cultural nature ([González et al., 2020](#)). This finding does not coincide with the study by [Colomo and Gabarda \(2021\)](#). The instrumental values emphasize the interest in the enjoyment of economic goods. This assessment does not fall in line with the study by [González et al. \(2020\)](#) which shows that the younger generation is not avaricious.

Political and religious values are found to be in the last positions of the axiological hierarchy. The low score for political values expresses a lack of concern for that area as seen in different studies ([González-Gijón et al., 2021](#)). For future teachers, the category of religious values is placed in the last position. This coincides with the studies by [González-Gijón, Martínez-Heredia, Amaro-Agudo, and Soriano-Díaz \(2020\)](#) and [Baeza and Imbarack \(2023\)](#) wherein religion is considered only as a cultural category. This is also in line with the work of [Arellano, Philominraj, Ranjan, and Cerón Urzúa \(2022\)](#) who reported religious values to be one of the least preferred ones.

Significant differences have been found concerning the values selected from the perspective of the gender variable. According to research by [Borg \(2019\)](#), [Huertas-Delgado et al. \(2020\)](#) and [González et al. \(2020\)](#), these have been the categories of emotive, moral, aesthetic, social, political, ecological and religious intellectual values that have shown notable variances.

In this sense, females were found to achieve higher scores when compared to men in all the analysed value categories coinciding with the research by [Abella et al. \(2017\)](#) and [González-Gijón et al. \(2021\)](#) except in the instrumental values as found in the study of [Magaña, Quiles, and Benítez \(2016\)](#). The particular cultural contexts and lived experiences of the participants raise different interpretations and understandings regarding the importance of values according to gender in line with studies that highlight the incidence of socialization and identity processes ([Li, 2023](#); [Rebollo-Catalán et al., 2017](#)). Nevertheless, studies show that men and women have quite similar value systems, demonstrating how culture shapes people ([Colomo & Aguilar, 2019](#); [Eriksson et al., 2020](#); [Mukoro, 2023](#)).

## 6. CONCLUSION

We conclude that the degree of possession of the value system by future pedagogues is high taking into account the results of the research. The axiological structure was as follows: Moral, ecological, individual, affective, corporal, intellectual, social, aesthetic, instrumental, political and religious. These results show a student is

interested in the development of a morally worthy life in the personal and social sphere and is equally concerned about ecology, environmental care, and sustainability. In addition, personal development, affective relationships, and care for physical and mental health are emphasized. On a second level, aspects related to less interest in acquiring knowledge, relationships with others, the enjoyment of leisure time in cultural spaces and relative detachment from material things are presented. Finally, we find apathy for politics as well as reluctance and rejection of religious issues. The differences about gender are found in intellectual, affective, moral, aesthetic, social, political, ecological and religious values with women showing higher mean values. It is important to highlight that the value structures of men and women are extremely similar which is related to the determining context of people. According to gender perspectives, the values transmitted through different socialization processes in educational establishments' shape the identities of boys and girls and at the same time guide the process of reflection on the society that we wish to construct.

## 7. RECOMMENDATIONS AND SUGGESTIONS

Identifying and analyzing the axiological structure of student teachers in private and public universities in central-southern Chile will allow proposing values education in the curricular plans of future teachers. On the other hand, the way values are transmitted by teachers is different which implies the development of pedagogical training programs that strengthen gender differences as an instance of cultural equity. Universities should develop activities to teach students to reflect on the differences in the transmission of values from a gender perspective, which constitutes a fundamental difference in building an equitable society. In addition, the Chilean Ministry of Education should strengthen educational instances, events, curriculum programs, and field activities and training in values since these are the basis of the educational process.

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### INSTITUTIONAL REVIEW BOARD STATEMENT

The Ethical Committee of the Universidad Católica del Maule, Chile has granted approval for this study on 2 May 2022 (Ref. No. UEC Report 111/2022).

### TRANSPARENCY

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

### COMPETING INTERESTS

The authors declare that they have no competing interests.

### AUTHORS' CONTRIBUTIONS

All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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